

App. No. 10/717828
Office Action Dated April 19, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Claim 2 is canceled without prejudice or disclaimer.

Claims 1 and 3-10 are amended.

Claims 11-19 are new.

Listing of Claims:

1. (Currently Amended) A device for supplying pressurized air to the tire of a vehicle wheel through the wheel hub, comprising wherein the device for supplying pressurized air is coupled to a bearing unit, said bearing unit having a non-rotatable race, and a rotatable race, the device for supplying pressurized air comprising:

a non-rotatable ring having an inner cylindrical surface and an outer surface, wherein the non-rotatable ring comprises a radially outer ring mounted adjacent the non-rotatable race,

a rotatable ring having an inner cylindrical surface and an outer cylindrical surface, wherein the rotatable ring is a radially inner ring and is mounted fast for rotation with the rotatable race,

a first, non-rotatable ring (11) to be mounted adjacent to a non-rotatable race (1) of a bearing unit (A);

a second, rotatable ring (12) to be mounted fast for rotation with a rotatable race (2,3) of the bearing unit (A);

at least a first air passage (13, 113) formed through the first, non rotatable ring (11),

wherein the first air passage is formed between the outer surface and the inner cylindrical surface of the non-rotatable ring,

at least a second air passage (14) formed through the second rotatable ring (12),

App. No. 10/717828
Office Action Dated April 19, 2005

wherein the second air passage is formed between the outer cylindrical surface and the inner cylindrical surface of the rotatable ring,

a sealing device (15, 16) interposed between the first non-rotatable ring (11) and the second (12) rings rotatable ring, defining therewith an intermediate chamber (17) communicating with said first (13, 113) and second (14) air passages.

2. (Canceled)

3. (Currently Amended) ~~A device according to~~ The device for supplying pressurized air of claim 1 2, wherein the outer surface of the non-rotatable ring is an outer cylindrical surface, and wherein the first air passage (13) is a radial passage formed between a the cylindrical outer cylindrical surface (20) and an the inner cylindrical surface (11a) of the first, non-rotatable ring (11).

4. (Currently Amended) ~~A device according to~~ The device of claim 1 2, wherein the outer surface of the non-rotatable ring is a side surface, and wherein the first air passage (113) is formed between a the side surface (21) and an the inner cylindrical surface (11a) of the first, non-rotatable ring (11).

5. (Currently Amended) ~~A device according to~~ The device of claim 1, wherein the first, non-rotatable ring (11) forms an axially protruding portion (18) for coupling with the non-rotatable race (1) of the bearing unit (A).

6. (Currently Amended) ~~A device according to~~ The device of claim 1, wherein the device for supplying pressurized air is further coupled to a rotational speed detecting device, wherein the first, non-rotatable ring (11) forms a seat (22) for coupling with a the rotational speed detecting device (C) for, and wherein the rotational speed detecting device detects detecting the rotational speed of the rotatable ring (12).

7. (Currently Amended) A bearing assembly for the hub of a motor vehicle wheel, comprising:

a the device (B) for supplying pressurized air of claim 1 as claimed in any one of the

App. No. 10/717828
Office Action Dated April 19, 2005

~~preceding claims, and~~

~~a bearing unit (A) with a non-rotatable race (1) adjacent to said non-rotatable ring (11) of the device (B), at least one rotatable race (2, 3) adjacent to said rotatable ring (12) of the device (B) and fast for rotation therewith, and~~

~~a bearing unit comprising rolling elements (4, 5) interposed between the non-rotatable race (1) and the rotatable race(s) (2, 3) of the bearing unit.~~

8. (Currently Amended) ~~A bearing assembly according to~~ The bearing assembly of claim 7,
~~comprising:~~

~~a device (B) for supplying pressurized air according to claim 5, and~~

~~wherein the non-rotatable ring forms an axially protruding portion for coupling with the non-rotatable race,~~

~~a bearing unit (A) wherein the non-rotatable race (1) has forms a seat (6) for coupling with said axially protruding portion (18) of the non-rotatable ring (11) of the device (B).~~

9. (Currently Amended) ~~A bearing assembly according to~~ The bearing assembly of claim 7,
~~the bearing assembly further comprising a rotational speed detecting device (C) for detecting,~~
~~detecting the speed of rotation of the rotatable ring (12) of the device (B) for supplying~~
~~pressurized air, wherein the detecting device (C) includes:~~

~~a sensor (8) carried by a mounting element (7) mounted onto the non-rotatable ring (11) of the air supplying device (B) and~~

~~a pulse wheel (9) mounted on the rotatable ring (12) of the air supplying device (B) and facing the sensor (8).~~

10. (Currently Amended) ~~A bearing assembly according to~~ The bearing assembly of claim 9,
~~wherein:~~ wherein the outer surface of the non-rotatable ring is a side surface,

~~the non-rotatable ring (11) of the device for supplying pressurized air (B) has at least one~~

App. No. 10/717828
Office Action Dated April 19, 2005

wherein the first air passage (113) that formed in the non-rotatable ring opens on a the side surface (21) of said first non-rotatable ring (11), and

wherein the mounting element (7) of the detecting device (C) forms a third air passage at least one air passage (23) communicating with said at least one first air passage (113).

11. (Currently Amended) A device for supplying pressurized air to the tire of a vehicle wheel through the a wheel hub, wherein the device for supplying pressurized air is coupled to a bearing unit, said bearing unit having a non-rotatable race, and a rotatable race, the device for supplying pressurized air comprising:

a non-rotatable ring mounted adjacent the non-rotatable race,

a rotatable ring mounted fast for rotation with the rotatable race,

at least a first air passage formed through the non rotatable ring,

at least a second air passage formed through the rotatable ring,

a sealing device interposed between the non-rotatable ring and the rotatable ring, defining an intermediate chamber communicating with said first and second air passages,

wherein the device for supplying pressurized air is further coupled to a rotational speed detecting device,

wherein the non-rotatable ring forms a seat for coupling with the rotational speed detecting device, and

wherein the rotational speed detecting device detects the rotational speed of the rotatable ring.

12. (New) The device for supplying pressurized air of claim 11, wherein:

the non-rotatable ring is a radially outer ring, and the first air passage is formed between an outer surface and an inner cylindrical surface of the first non-rotatable ring, and

App. No. 10/717828
Office Action Dated April 19, 2005

the rotatable ring is a radially inner ring, and the second air passage is formed between an outer cylindrical surface and an inner cylindrical surface of the second rotatable ring.

13. (New) The device for supplying pressurized air of claim 12, wherein the outer surface of the non-rotatable ring is an outer cylindrical surface, and wherein the first air passage is a radial passage formed between the outer cylindrical surface and the inner cylindrical surface of the non-rotatable ring.

14. (New) The device for supplying pressurized air of claim 12, wherein the outer surface of the non-rotatable ring is a side surface, and wherein the first air passage is formed between the side surface and the inner cylindrical surface of the non-rotatable ring.

15. (New) The device for supplying pressurized air of claim 11, wherein the non-rotatable ring forms an axially protruding portion for coupling with the non-rotatable race of the bearing unit.

16. (New) A bearing assembly for the hub of a motor vehicle wheel, comprising:

the device for supplying pressurized air of claim 1, and

a bearing unit,

wherein the bearing unit further comprises rolling elements interposed between the non-rotatable race and the rotatable race.

17. The bearing assembly of claim 16, wherein the non-rotatable ring forms an axially protruding portion for coupling with the non-rotatable race, and wherein the non-rotatable race forms a seat for coupling with said axially protruding portion of the non-rotatable ring.

18. (New) The bearing assembly of claim 16, wherein the detecting device includes:

a sensor carried by a mounting element mounted onto the non-rotatable ring, and a pulse wheel mounted on the rotatable ring and facing the sensor.

19. (New) The bearing assembly of claim 18, wherein the outer surface of the non-rotatable

App. No. 10/717828
Office Action Dated April 19, 2005

ring is a side surface, wherein the first air passage formed in the non-rotatable ring opens on the side surface of said non-rotatable ring, and wherein the mounting element of the detecting device forms a third air passage communicating with said first air passage.